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ABSTRACT

This paper examines gender messages within advertisements and informational, technology-focused materials that are targeted toward a general population of consumers. The pattern of gender bias in visual messages and stereotyping which prevails in advertising appears to be carrying the same messages from print to television and into the newest format for advertising, the World Wide Web. An examination was conducted of a representative sample of popular magazines and promotional material about multimedia technology that were available to the general public and teachers, from direct mailings to schools, and areas of public transport. In addition, television and Internet advertisements were examined over the course of the next several months. The prevalent portrayal of gender roles in advertising says much about the society it represents. Research indicates that in both the print and video advertising marketplace, consumers see at least three times as many male as female characters associated with the products being sold. This is especially true of advertising aimed at children and teenagers. Findings indicated that in the print, televised, and Internet advertisements, women were consistently portrayed as subservient, in the background, or not using the technology in a productive way. The responsibility to change the public image and attitudes about females and technology cannot rest solely with the advertisers, but they can do a lot to help change the public image. (Contains 25 references.) (AEF)

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# Gender Equity On-line: Messages Portrayed With and About the New Technologies

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## Abstract

This paper examines gender messages within advertisements and informational, technology-focused materials that are targeted toward a general population of consumers. A close look reveals a clear, consistent, and pervasive pattern that clearly favors males. The authors raise issues about message design, language, images, advertising, educational facilities, packaging, and socially constructed gender roles that carry over into applications of the new technologies.

Over the years, society has carried messages about gender stereotyping through traditional forms, within instruction and schooling, mass media, social practice, entertainment, and so on. The increased attention to gender equity should yield more balance, especially as related to the newer media that are being emphasized within educational settings and fields of employment that involve high technology applications. As more emphasis has been placed on using multimedia for instruction and job training, one would expect to see both women and men using the computer-based media in meaningful, productive ways. Yet a close examination of gender as portrayed within the popular media, reveals a clear, consistent, and pervasive message that has deep historical roots, winds throughout our daily lives, and perpetuates itself through the complexities of society. The role of females in relation to the new media, has made little progress beyond that depicted within the older media forms.

As computers replace typewriters, telecommunications and multimedia become more prominent in educational settings, and personal computing assumes greater importance in more homes, females have gained more access to the technology. Yet females still are portrayed in supportive roles while males are shown using the technology in productive ways that benefit their careers.

These persistent patterns continue to influence public perception of gender stereotypes and perpetuate attitudes that clearly favor male technology users. Instructional practice is influenced by these messages which constantly feed the old system and all but strangle attempts to pay serious attention to gender equity (McCormick, 1994; Gornick & Moran, 1972). Materials developed for use in public, private, and military schools as well as images delivered to the public through advertising, television, and public service messages continue to portray women and men in stereotypical ways.

The consequences of this portrayal are evident in our schools. Research reveals that among high school students there are consistent, significant gender differences related to interest and confidence about using computers as well as gender-stereotyped views about computer users (Martin, Heller, & Mahmoud, 1992; Shashanni, 1994). The low confidence among girls in working with computers, and interest in computers, can be explained as a product of the social institution in which their individual self-concepts are built (Shashanni, 1994).

Despite attempts to correct this situation over many years, progress is slow to come and it is obvious that gender bias continues concerning use of the new media. For example, a study of computer clip-art images available for business, school, and home use, revealed that the stereotypes have invaded the desktop computing environment, with images of men depicted in leadership and authority roles, while women are depicted in subordinate roles (Binns & Branch, 1995).

The complexities of gender stereotyping are enormous, yet can be difficult to recognize, reveal, analyze, explain, and redirect. Like society itself the complexities reflect the dynamics of different situations in different ways, among different individuals. An examination of gender stereotyping in advertising regarding technology, reveals inequities that result from a persistent pattern of practice.

This paper addresses the visual messages about gender that are portrayed in the advertising about computer technology.

Advertising is the mass communication of information usually paid for and usually

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"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Alice D. Walker
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

persuasive in nature, about products, services, or ideas presented by sponsors via various media (Arens & Bovee, 1994). The pattern of gender bias in visual messages and stereotyping which prevails in advertising seems to be carrying the same old messages from print to television and beyond into the newest format for advertising, that of the World Wide Web (Web).

## Ads Perpetuate Stereotypes

In the Spring of 1996, the chair of a technology planning committee at a major university compiled a folder full of technology advertisements for the perusal of a committee charged with making decisions about the technology needs of an entire college. Only one of the advertisements contained images of females. That particular advertisement contained four images within one page; one of a male, two of females, and one of a product produced by the computer imaging technology.

A closer look revealed that the presence of females did little to promote the role of women using technology successfully. In one image, the woman was portrayed as small and insignificant, off to the side of the picture, and wearing a red, casual blouse. The second female image was that of a teenage girl, positioned as a tiny image at the bottom of the photo, sitting in front of a computer but not using it; she was reading a book and wearing a red blouse.

In contrast the image of the man was big, bold, up front in the photo; the man looked knowledgeable and in charge, was wearing a white lab coat, and was clearly a chemist or chemistry professor who was using the technology to his advantage. Upon questioning by a member of the technology planning committee, it became clear that the male committee chair, a career school administrator, had not noticed any gender differentiation and did not think that it was important enough to merit a second thought. The folder was circulated among the committee members for their perusal in selecting multimedia equipment for a yet undesigned multimedia classroom. Not only was the imagery of technology for males perpetuated, but the idea of selecting equipment with complete disregard for the educational environment was being mandated.

This experience led to an examination of a representative sample of popular magazines and promotional material about multimedia technology that were available to the general public and teachers, from direct mailings to schools, at newsstands, libraries, schools, and areas of public transport. Areas of public transport included such places as airports, train stations, subway stations, travel agencies, business class and tourist hotels, as well as aboard airplanes, trains, passenger ships, subways, and trains throughout the United States, Asia, and Europe. In addition, television and internet advertisements were examined over the course of the next several months. Not surprisingly, there were commonalities in the portrayal of gender that carried across the print, televised, and internet advertisements.

The prevalent portrayal of gender roles in advertising says a lot about the society it represents. Not only is an advertiser selling a product, but an identity or image, which can be attained only by purchasing the product. But the aftermath is that the consumer is left with a deceptive, manipulated, and rendered personality that does not represent the behaviors of the consuming public.

Research indicates that in both the print and video advertising marketplace, consumers see at least three times as many male as female characters associated with the products being sold. This is especially true of advertising aimed at children and teenagers. In those advertisements that used spokespersons or endorsers, the ratio was nine males to everyone one female (Adler, Lesser, Meringoff, Robertson, Rossiter, Ward, 1980). When featured in advertising, women tend to be represented in select feminine roles such as wife, mother, nurse, teacher, or secretary (Macklin & Kolbe, 1984).

Stereotyping is a basic part of human cognitive activity and people do make categories and construct relationships based upon similarities and differences that enable them to make predictions in daily life. Social categories play a vital role in any person's thinking about people so it is important to attend to where these categories are used and to what purpose they are put (Young, 1990). Unfortunately, many people do base their opinions about social issues and the role of females on the messages delivered through the mass media,



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including the advertising media. Images of women do remain as a socially constructed category in peoples' minds.

### Print-Based Advertisements

A representative sampling of magazines collected by several people revealed consistent patterns in the advertising about the new technologies. Men were portrayed in prominent positions within the advertisements and accompanied by messages to "work stronger, work harder, gain power, manage people, and gain career advancement." The men projected professional images of people with great competence who were successful at work. The women on the other hand, were depicted in subordinate positions, serving others, and in roles that did not use the technology to accomplish their jobs or gain power or promotions. The women were usually wearing casual dress, often red in color, and seemed to be used as decorative graphics rather than in any meaningful way.

One magazine for educators, contained only two technology advertisements that included people. Toward the center was an ad with two women teachers, one a middle-aged, grandmotherly-looking, English teacher and the other a young, slender, blond, graphic designer. There were the stereotypes, the overweight and dull-looking grandmotherly English professor and the sexy, young blond graphic designer. Unfortunately, the advertisement also depicted both women standing at the bottom of a stairwell, clearly doing nothing for their career success by using their laptop computers that matched their body builds. Yes, the grandmother held the heavier, boxy laptop, and the young women held the more slender laptop, while the advertiser claimed that the computers were matched to the needs of the two women.

The inside back cover of that magazine carried the second image of a person, this time a male. In addition to being in a more prominent cover spot, the man depicted in the advertisement clearly was on top of the world as a result of using his laptop computer. He was freed of his ties to his office and was overlooking a beautiful body of water with lovely islands, working independently. Obviously, his laptop computer had liberated him from the physical confinements of his office space.

Both advertisements were produced by the same company, both were in black and white, both promoted laptop computers, and both followed the stereotypical representation of men and women regarding computer usage. Further, the advertisers even included the typical media portrayal of women as either grandmotherly or young and sexy. What ever happened to typical-looking women? Why are they absent from the advertisements?

Not one of the printed advertisements showed women achieving school or career gains due to using the technology. Why not?

In contrast to the teenage girl wearing the red blouse and reading a book while sitting next to a computer, a similar advertisement depicted a teenage boy who was proclaimed to have discovered a prize-winning formula, obviously implying that he did so as the result of his use of computer technology. This contrast seems obvious. Why then would so many people not notice the imagery and continue to perpetuate it?

There were some interesting advertisements for business travelers that focused on the great features within new models of wheeled luggage that could be rolled down airplane aisles. Those with male characters tended to emphasize pockets for computer equipment, maintaining a common statement of being functional within a technological business sense. The advertisements with female characters focused on being lightweight and spacious enough for all of a woman's weekend fashion needs.

One luggage advertisement clearly depicted three servants who were packing their employer's bags in preparation for a business trip. Although the reader could not see the employer, it was obvious that he was male from the collection of objects the servants had gathered. The most prominent feature of the advertisement was the computer equipment that fit so neatly within the luggage compartments. The advertiser wanted so much for the computer space to be noticed that the computer was given a much more important spot than the luggage itself. Perhaps most importantly, the advertisement clearly portrayed the message of the computer being a male machine, a very important male object

within the collection of male clothes and supplies.

An eye-catching advertisement for a computer server, depicted a young, slender, and very sexily-posed woman sitting on the floor and leaning on a red, distorted computer standing in the vertical position. The woman was purely decoration. The advertisement dripped with sexual innuendo. A subliminal image of male genitalia was super-imposed onto the upright computer, reflected in the white lighting that matched the woman's white blouse that leaned against it. Such an advertisement certainly raises questions about what is being sold and under what disguise?

From this sampling of printed advertisements, it is clear that females are depicted in technology advertisements much less frequently than males. Further, when women are depicted, they are usually used as interesting decorations rather than as productive users of the technology.

## Televised and Video Advertisements

The complexities of television advertising are too great to address fully in this paper. Suffice it to say that the television industry depends upon money from paid advertising for its livelihood. Further, the television networks are responsible to the advertisers, not the general public of television viewers, for the viewers do not support them financially (Ploghoft & Anderson, 1982). Thus the advertisers have a great deal of power concerning the kind of messages that are issued to the public via television.

Television is a pervasive presence in our nation's homes, and is argued to be the most common, constant, and vivid learning environment (Signorielli, 1993). Television's vivid and recurring patterns of images, information, and values leave few people untouched. Numerous studies conducted over more than twenty-five years, show that the mass media plays an important role in the socialization process of children and adults (Berry & Mitchell-Kerman, 1982; Roberts & Maccoby, 1985; Signorielli, 1993).

Advertisements on television are sex typed and stereotyped (Courtney & Whipple, 1983), with strong links made between women and attractiveness (Downs & Harrison, 1985), and men and authority (Bretl & Cantor, 1988; Lovdal, 1989). Research generally shows a relationship between television viewing and more stereotypic conceptions of gender roles, with television promoting notions of more limited roles for women in society (Signorielli, 1993). Women in advertisements have been portrayed in bathrooms, kitchens, living rooms, backyards, and other home making roles, yet it is almost invariably men who advise women on the virtues of new household clearning products, thus disempowering women even in the home and limiting them to roles of physical attractiveness and submissive domesticity (Rutherford, 1994).

Some advertisements directly state that they are empowering women, but in actuality they are only manipulating them (Savan, 1994). A large portion of advertisements tie women to the house through a sense of guilt by twisting the complex relationship between guilt, household cleanliness, and womanhood. "Since a woman could wield authority only in the private domain, if she failed to stamp out dirt, she failed as a woman" (Savan, 1994, p. 189). The advertisers continue to bombard women with images of cleanliness and multiple specialized cleaning products, that if purchased would actually keep women cleaning for longer periods of time, rather than relieving women of work as a result of buying the products. The advertising industry combines its approach to sell women with the guilt and fear of not pleasing others enough, with not being perfect enough, while at the same time running parallel advertisements that play on self-empowerment realized by purchasing something solely for personal reasons, like clothing, shoes, or cars (Savan, 1994).

If we were exposed to few advertisements, this might not be as serious. But how many commercial advertisements are we likely to see on television? A sampling of popular programs during September 1996 shows that we are bombarded with advertisements (see Figure 1).

Within the advertisements are a smattering of technology-related topics. For example, there were two different United Parcel Service (UPS) spots that advertised the new on-line package tracking system. Both advertisements opened with shots of a female worker in an office, but it quickly became apparent in each that she was doing some clerical task that was



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**Figure 1**
**Television Advertisements by Program**

| Title | Day | Time | Minutes | Number Ads |
|---|---|---|---|---|
| Bill Nye Science Guy | Weekdays | 4:30 p.m. | 30 | 0 - Public TV |
| Sseinfeld | Weekdays | 6:30 p. m. | 30 | 10 |
| Ellen | Wednesday | 7:00 & 7:30 p.m. | 30 | 14 |
| 60 Minutes | Sunday | 6:00 p.m. | 60 | 18 |
| Sesame Street | Weekdays | 8:00 & 9:00 a.m. | 60 | 0 - Public TV |
| Days of Our Lives | Weekdays | 12:00 & 1:00 p.m. | 60 | 45 |
| Murphy Brown | Monday | 8:00 p.m. | 60 | 19 |

unrelated to the package tracking. One male in each commercial took center stage and manipulated the computer to track the package. Clearly this depicted males controlling technology while the females tended to more routine clerical duties. Both advertisements contained mostly males within the working crowd. That might very well reflect the nature of the population at work.

American Telephone & Telegraph (AT&T) sponsored an advertisement showing four boys walking down a country road and doing fun things. There was no direct message about what their actions had to do with AT&T, but in any case, males were identified with AT&T.

One advertisement for cellular telephones shows a female real estate agent receiving a call right in the middle of showing a beautiful home to potential buyers. Does she act upset at the interruption? No, she is relieved that the school nurse was able to call her to pick up her sick daughter. Her cellular phone had served its purpose to her role as a mother, not as a real estate agent. A parallel advertisement for the cellular telephones featured a male who was able to perform his job much more proficiently because he could receive business telephone call while out of the office with another client.

A promotional tape for the Video Toaster yielded more of the same. The video was obviously targeted toward a male audience. The music was reminiscent of a football game pep rally, and it kept up its fast pace throughout the video. The male voice was authoritative, knowledgeable, and even macho sounding. The images of females in the tape were purely decorative. First, there was a woman operating a camera for the benefit of her male colleague. Then there were several women used as beautiful models while the males learned about the capabilities of the video toaster and image digitizing. The eight-minute video even contained shadow views of women in profile dancing across the screen either in the nude or in tight-fitting clothes. This was done in order to demonstrate those video effects. There was only one woman's name in the credits; she is a company employee and played the part of a model in the video. Training tapes from the same company reflect the same style, so you can imagine what it might be like for a woman trainee to use them. It appears that the company did not expect women to be serious users of this technology, but simply to be models that the men would video and then digitize.

### Internet-Based Advertisements

Most of the visual representations of women in Web advertising are a reflection of the current trend used in the other advertising media. Women are portrayed as decorations or simply as product users. When depicted in the same or corresponding type of advertisements as men, the women are shown in supportive or subordinate roles. The male central characters in advertising are depicted as men in authority roles and as gaining more power by using the technology. The focus frequently is on their faces and they are shown in business dress or high class casual wear that suggests a successful business man. The female central characters, on the other hand, are usually depicted by a lovely body or faceless, selected body parts. When faces are shown, they reflect a beautiful and friendly person, but do not suggest achievement.

For example, in the Yahoo search engine a series of three advertisements were found in the business and economy section, under health and fitness. The first advertisement portrays the upper left part of a male torso, with no head, and obviously emphasizing his musculature but not necessarily sex.



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The next advertisement depicts a female full body image in a graceful backbend that begins with balancing on the toes and ends with the arms and fingers pointing in a nearly parallel position to the feet and legs. The reader is compelled to give the advertisement a second look because of the extreme body position. A third advertisement at that spot is intended to sell exercise equipment and it depicts a blond female in a black dress sitting with one armed raised to lift her hair from her shoulders and looking very sexy. There are no images of the exercise equipment being sold, only the suggested result. Of course, the reader could choose to click on a button to find more information about the site and would then eventually encounter some information about exercise equipment.

Another set of advertisements for AT&T WorldNet Service is drawn from the Yahoo search engine under the topic of K-12 and college preparatory schools. Four advertisements in this series, two with male characters and two with female characters are described here. The first advertisement depicts a young adult male on the left of the bannerhead who says, "hi, my name is TIM and I can't get on the INTERNET." Across the banner on the right side of the screen, a mature adult couple reply "hello TIM" and give the visual impression that they will help him. The second advertisement depicts a young adult male on the left side of the banner who says, "my INTERNET access bill ranges anywhere from $10 to $200." The mature man, appearing to be a mentor or fatherly image, on the right side of the banner replies, "You need STABILITY, Pat." The third advertisement depicts a young adult female who says "my provider LEFT town on me." Across the banner from her, on the right side of the screen, is another adult female who says, "I know how you FEEL." The women seem to be helpless, discussing feelings of abandonment but not of finding a solution. The fourth advertisement depicts a young adult female on the left side of the banner who says, "My provider never called me BACK." The woman who replies to her from the right side of the banner says, "Did you speak CLEARLY, Jan?" What kind of message does this give to males and females who might use this service? It certainly does nothing to promote women's confidence and control within the high technology environment.

In addition to the content of the advertisements, the placement of the advertisements can seem curious as well. For example, in the Excite search engine, we found an advertisement for Kaufmann investment funds under the reviews section within the subtopics of shopping and swimwear. The page gave information about tan through swim suits and how to see on-line photos of women modeling bikinis that then could be ordered by calling a toll-based telephone number. At the top of the page was the Kaufmann investment advertisement depicting two businessmen, looking very confident and self-assured. The focus of the advertisement was on the men's faces and confidence suggested by wise financial investments. Why was this advertisement in the ladies swimwear section?

Another curious placement was an advertisement for the OutPost Network which depicted a woman's friendly-looking face asking "How come you never write?" This advertisement clearly did not portray the woman as confident, but again as having been abandoned, this time by a man. The Yahoo search engine had placed this advertisement within two areas that we stumbled upon within Society and Culture. The first was within Gender, Men, Circumcision and the second was within Gender, Men, Fathering. It is curious why these advertisements were placed in those locations. Certainly there is room for social suggestion about women's status, the relationship between men and women, social responsibility, who is in control, and so on.

Imagine the impact these types of advertisements and their subtle messages might have on a woman's self-esteem. Are these the type of images we really want to provide to our young girls? How do images like these add to the message of the internet being the male domain? Can images like these influence decisions that females make about their interest in the fields of science and technology? A number of key questions need to be asked regarding the use of advertising about technology. Are current advertisements targeted toward the male users of the Web? If so, why? Is the visual representation of gender roles in the Web advertising


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reflective of the current skill and level of computer usage by a majority of women? Shall we then assume that women have difficulty using the technology in productive ways? Why?

The Web offers a number of opportunities for advertisers to complement other forms of media, not replace them (Teague, 1995). The number of print advertisements that include a web address is growing each day. Advertising on the Web can be inexpensive compared to print or televised advertisements. For example, Amoco, a $27 billion petroleum and chemical products company launched a home page on the Web during the past year and during the month of August, 1996 enjoyed 285,527 "hits" on the site (Geracioti, 1996). A Web site with an extended presence can have an estimated annual cost that is equivalent to a single full page ad in one or two issues of a major trade magazine. Further, the Web has the benefit of using real-time interaction to collect marketing statistics.

In many cases, Web advertising is comprised simply of company brochures delivered electronically, but in other cases the sites are more sophisticated. It is clear that the advertisements now have another venue of delivery and that the same types of gender stereotypes have emerged in that capacity. The question we need to be asking is, how can the growing technological marketplace of the Web be used to bring about change in the way women are presented visually to the public? How can the imagery of women and technology be influenced by regular people like us?

## Community Adjustments

Visual imagery of men and women working together and using technology productively would provide some common ground of experience, and it could do wonders for improving some of the attitudes about gender stereotypes concerning technology.

If an image is indeed worth a thousand words, if it leads to a cognitive understanding and expectations, or it shapes self concept, then images of women and technology must evolve to a more fair representation, not just in numbers of women depicted in technology advertisements, but in the quality of the way they are depicted within those advertisements.

It can no longer be acceptable to portray women in print, televised, or internet advertisements about technology as subservient, in the background, or not using the technology in a productive way. It is not acceptable to portray boys developing the wining formula while girls sit beside computers and read books. It is not acceptable for men to be portrayed as successful, powerful, and in control due to technology while women are portrayed as simply nurturing and friendly, or worse yet as sexy decorations draped over computers. It is not acceptable to show women using cellular telephones solely in the role of mothers who get called away from their jobs due to mothering responsibilities. Although that is part of life, it is not the part that is stressed with the fathers who use cellular telephones at work.

Finally, it is not acceptable to depict women as fluff on government Internet pages, supported by taxpayer dollars. As the Internet becomes more accessible and popular with increased numbers of users, it will become more important as a vehicle for advertisers. This is a computer-based medium, yet if current trends continue, it too, will depict technology as part of the male domain.

The responsibility to change the public image and attitudes about females and technology cannot rest solely with the advertisers, but they can do a lot to help change the public image. Most certainly it will take pressure from the research, women's, business, and public communities. Teachers, parents, administrators, politicians, authors, illustrators, instructional designers, medical personnel, and all other community leaders who work with children will need to be aware of the issues as well, so that they can help bring about the changes necessary to unlock the doors to the technology field for the female community.

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